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December 15, 1970

MEMORANDUM

[redacted]

D00016431

TO: J. Rosengren

FROM: C. Haussmann

SUBJECT: Classification of Laser-Induced Thermonuclear Explosives

REFERENCE: 1) SRD Classification Bulletin WNP-36 dated October 5, 1970
2) SRD Memo to Distribution COVD-1055 dated December 4, 1970

Nuclear Explosives Policy

It seems clear that before your panel can reasonably tackle its chartered goal of reviewing current classification guidance for laser-induced thermonuclear explosions, the basic U.S. policy with regard to nuclear explosives needs affirmation. Does it continue to be the same as it was in the past, or has it changed? Although I have never seen this policy in writing, I would paraphrase it as denying or restricting the flow of nuclear design information and concepts of a character that would appreciably aid other countries, organizations, or individuals to design and construct nuclear explosives. Some such policy, undoubtedly more elegantly expressed, has been - and, I believe, still is and still should be - the U.S. policy.

Sometime in the future, probably within a few decades, many nuclear design concepts will be available in the open literature of the world, having filtered through security barriers or having been re-invented on the outside. With a continuation of our current policy this day can possibly be put off by a decade or more.

Technology

DOE b(3)

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[redacted]

[redacted] data as defined in the Atomic [redacted] Its trans- [redacted] disclosure of its contents in any manner to an unauthorized person is [redacted]

Development Program

DoE b(3)

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DoE b(3)

All-fusion explosive technology for at least the foreseeable future will require sophisticated scientific understanding and considerable inventiveness. There is, however, a major development advantage in comparison with fission explosives. Most, or all, early all-fusion experiments can be done in the laboratory and with trivial quantities of nuclear material, and hence for appreciably less total cost than is the situation with conventional nuclear explosives.

Nuclear Material

DoE b(3)

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The unique characteristics of the all-fusion approach could bring about an "Nth organization" problem, let alone an "Nth country" problem.

Motivation

The other major all-fusion explosives difference worth noting is that, perhaps because of their early state of development, some optimism exists (which I do not share) relative to getting economical electrical power from them. Therefore, those interested in the goal of cheap power or pursuit of the dollar are motivated to get into the all-fusion arena - and they would like to work in an unclassified environment.

Conclusion

"The Commission has expressed the desire to provide researchers in this field, with or without Government sponsorship, with as much latitude as possible within the limits of national security." Until the country is willing to relax its policy concerning dissemination of nuclear explosives technology and capability - a change which clearly transcends the prerogatives of the AEC - very little unclassified latitude is permissible indeed! There is even a value judgment involved in permitting other than the nuclear design laboratories work on this program, which is closely related to more conventional nuclear weapons technology and, because of its nuclear materials needs, which does not have a materials or "quantity" constraint.

Distribution:
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2A - A. Biehl
3A - C. Haussmann
4A - [illegible]
Cy 6A - [redacted] Donald
7A - J. Nuckolls
8A - H. Reynolds
9A - E. Teller